

*B2*  
In the case of a wafer boat for use with a 300 mm wafer, in one embodiment, the boat includes 10 slots intended to hold 10 wafers. Such a boat is approximately 11 cm long. The opposing upper supports are positioned approximately 6.8 cm above the lowest point of the groove, and spaced apart from one another by approximately 10.4 cm. Each slot will have a width of approximately 0.89 mm. The groove will have an arc length of approximately 20.82 mm. FIG. 4 depicts a triangle having a hypotenuse "A" defined as the wafer radius extending from the center of the wafer to the wafer periphery or edge at a point at which one of the upper support guides holds the wafer in the slot. An angle  $\alpha$  defined between the hypotenuse "A" and a radius "B" originating at the center of the wafer and extending downward to a point on the wafer periphery which is positioned in the middle of the grooved portion on which the wafer rests. A third radius "C" extends from the center of the wafer to the periphery of the wafer to a point at which the second upper supporting guide holds the wafer in the slot. In the inventive wafer boat, the angle  $\alpha$  is in the range of 10 degrees to 80 degrees, and optimally about 37 degrees. The total angle defined between radius A and radius C is approximately 74 degrees.

### IN THE CLAIMS:

Please amend claims 1, 3, 5, 7, 9-11 and 13 as follows:

*Sub D17*  
1. A semiconductor wafer boat, comprising:

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- a) a first end and a second end;
  - b) a plurality of slots positioned between said first and second ends for receiving semiconductor wafers therein, each of the slots comprises first and second upper support guides to maintain the semiconductor wafers in a vertical orientation during wafer processing at elevated temperatures; and
  - c) a lower grooved portion upon which a portion of the wafer <sup>will</sup> ~~is in~~ contact, and which supports the weight of the wafer when the wafer is positioned thereon, the grooved

portion having an arcuate configuration which, at semiconductor processing temperatures of between approximately 1000 °C to 1400 °C, substantially conforms to the portion of the wafer supported thereon.

3. (Amended) The wafer boat of claim 2, wherein the silicon carbide is recrystallized silicon carbide.

5. (Amended) The wafer boat of claim 1, wherein an angle  $\alpha$  in the range of 10-80 degrees is defined between a first radius of the wafer extending from the center of the wafer to the periphery of the wafer proximate the first upper support guides and a second radius extending vertically downward from the center of the wafer to a point on the periphery of the wafer which corresponds to the center of the grooved portion.

7. (Amended) The wafer boat of claim 1, wherein the plurality of slots between the first and second ends of said boat are configured to support up to 25 semiconductor wafers .

9. (Amended) The wafer boat of claim 1, further comprising at least one window positioned not more than 10 mm from the first and second ends of the boat.

10. (Amended) The wafer boat of claim 9, wherein the at least one window increases radiation distribution about the wafers in the boat when the boat undergoes processing at elevated temperatures.

11. (Amended) A semiconductor wafer boat, comprising:

a) first and second ends;

b) a plurality of slots positioned between the first and second ends for receiving semiconductor wafers therein, each of the slots comprises first and second upper support